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Report of "Factuality Indexes" reflecting relative frequency of factually supported statements as compared with unsupported generalizations in 25 introductory sociology textbooks published from 1952 to 1958. Unsupported generalizations are reported as most frequent type of sentence; eight textbooks with highest factuality averaged 7.6 percent in classroom circulation, while eight with lowest factuality averaged only 1.6 percent.

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THE RELATIVE FACTUALITY OF RECENT INTRODUCTORY SOCIOLOGIES

The Second Report from the Project for Comparative Analysis of Recent Introductory Sociologies
(Revised April 6, 1959)

By Hornell Hart.

U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
Office of Education

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THE FINDINGS SUMMARIZED

Generalizations unsupported by any specific evidence are the most frequent type of sentence in the 23 introductory textbooks published from 1952 to 1958. The relative frequency of factually supported statements, as compared with unsupported generalizations, is reflected in the indexes shown in the following table:

Authors*	Factuality Indexes
Gittler	67
Ogburn and Nimkoff	42
Freedman and Associates	39
Broom and Selznick	35
Lundberg, Schrag and Larsen	22
Sutherland, Woodward and Maxwell	13
Merrill and Eldredge	5
Mercer	-2
Landis	-29
Sellew, Furfey and Gaughan	-33
Rose	-37
Green	-43
Carr	-49
Bogardus	-60
Rumney and Maier	-60
Bossard and Associates	-64
Cuber	-68
Koenig	-73
Roucek and Warren	-76
Bierstedt	-80
Hertzler	-80
Lee	-91
Fichter	-100

THE MEANING OF THE FACTUALITY INDEX

The Above Findings Are Not (of Course) a Final Verdict. They represent merely research results by one sociologist (himself the author of a number of sociological textbooks), derived by methods designed to exclude, as far as practicable, both bias and erratic deviations.

*Bibliographic information about these 23 textbooks is given at the end of this report.

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The Objective. The Factuality Index is designed to measure, as accurately as practicable, the extent to which the textbook in question indicates specific facts from which its generalizations are derived, and does so in a manner such that a critical reader can readily locate the sources from which the facts in question were derived. This index is not intended to measure the truth, falsity, accuracy or impartiality of the statements which appear in the texts to which the index refers. Rather than attempting any final verdict, this exploration is intended to stimulate other investigators to apply similar or improved techniques, in order to arrive at reliable results, verifiable by any competent sociological researcher.

The Classification of Sample Sentences. A systematically randomized sample of 100 declarative sentences was taken from each of the 23 texts listed on page 1, making a total of 2300 sentences. For each text, the 100 sentences were classified (by me personally) into eight categories, as follows:

A. Clearly factual:

1. Sentences which state specific facts, or generalizations derived from specified facts, or which are part of case-history or survey materials quoted, where the source is indicated in one of the following ways:

   a. Specific footnote appended to the sentence in question, or to the paragraph to which it belongs.

   b. Footnote for the section, provided that it seems clear that the fact stated in this sentence was derived directly from that source.

   c. Textual reference to a specific source, without footnote.

2. Comments, explanations, or general conclusions clearly related to facts of the above type, and not making assertions going beyond these data--except in the statement of hypotheses derived from data of the type referred to.

B. Clearly unfactual:

3. Generalizations not presented specifically as having been derived inductively from specified facts, nor derived deductively from principles supported inductively, but presumably derived from common sense, from general observation, from commonly accepted belief, or otherwise. Included here are all valuational sentences other than factually supported statements about valuational behavior.

C. Semi-factual:

4. Unannotated statements of alleged specific facts, whether based (supposedly) on common knowledge, or whether stated on the alleged authority of a supposed expert.

5. Generalizations not presented as derived inductively from specified facts, but offered with one or more illustrative factual examples, for which sources are indicated.

6. Generalizations like the above, except that the examples are not footnoted, and may (in some cases) be merely imaginary.

D. Related to the logical structure of the text:

7. Definitions, and explanations as to divisions of subject-matter.

E. Miscellaneous:

8. Summaries, and statements of conclusions derived from annotated sources, where it is not feasible for the appraiser to determine the factual quality of the material thus summarized or quoted.

In classifying sentences as factual or unfactual, my procedure has been to search diligently in the context in order to discover whether the author has made his sources known in such a way that at least a competent sociologist would recognize what evidence, if any, was actually used in reaching the conclusions presented.

The Formula for the Index. The formula is so constructed that, for a text whose sample sentences included at least some clearly factual sentences and no clearly unfactual ones, the index would be 100, while for a text whose sample sentences included no clearly factual sentences but at least some clearly unfactual ones, the index would be -100. When preliminary indexes had been calculated on this basis, possible associations of the resulting scores with frequencies of sentences of the C, D, and E types were explored. It was then discovered that frequencies of type-5 sentences are significantly and positively associated with such scores. On that basis, the following formula was derived:

$$F.I. = 100\,\frac{(1) + (2) + (5) - (3)}{(1) + (2) + (5) + (3)}$$

where F.I. is the Factuality Index, and the numbers in parentheses refer to the frequencies of the types of sentences listed above.*

This Is Not a "Footnote Index." Merely to tabulate the number of sentences containing footnotes in relation to the number which do not contain them would not produce a valid factuality index. As one critic has pointed out, elaborate references to textbooks of previous writers who in turn had made elaborate references to textbooks written by previous writers--and so on in indefinite regress--would most likely represent a compounding of armchair theorizing and unverified common-sense observations. Careful students of the present report will note that footnoted sentences of this type are classified under category 3, when they clearly belong there, or (where the factuality of footnoted quotations or citations is doubtful) are classified in category 8, and are then not considered in calculating the factuality index.

On the other hand, textbook writers who combine factual verification of their generalizations with skillful presentation calculated to appeal to undergraduate students and to college department editors, do in many cases find ways of giving adequate evidence of factuality without loading down their pages with excessive numbers of footnotes or even of parenthetical references. Sample sentences taken from such writers are likely to be classified fairly frequently in the 1, 2, and 5 categories, and thus do count toward a high factuality index.

*Cf. Ogburn, op. cit., p. 18.

FACTUALITY AS RELATED TO CLASSROOM CIRCULATION

The Contrast:

The eight textbooks with the highest factuality,	ranging from +67 to -2,	averaged 7.6% in circulations
The eight textbooks with the lowest factuality,	ranging from -60 to -100	averaged 1.6% in circulations

Roughly speaking, the above contrast means that the top third of the textbooks, with respect to factuality, had over half of the reported classroom circulation while the lowest third in factuality had a total of only about one-eighth of the circulation.

The Correlation. The Pearsonian correlation between the factuality indexes and the percentages of reported classroom circulation is found to be r = .475. Student's t for this correlation is 2.84, indicating that less than once in 100 such investigations would a relationship as close as this arise merely by chance. The prediction formula is

$$C.C. = .592 + .0445\ F.I.$$

where C.C. represents percentage of reported classroom circulation, and F.I. represents the factuality index. Simply put, this formula means that an increase of not quite one half of one percentage point in reported classroom circulation is associated with each 10-point rise in factuality.

The Exceptions. When the prediction line is drawn on a scattergram of the 23 textbooks, a number of marked deviations from the central trend are evident. Among the most striking of these are Cuber, Green and Broom in the upward direction, and Gittler in the downward direction. Hypotheses for explaining these deviations suggest themselves.

Cuber's text presents its statistics in humanized, easily understandable graphs. Moreover, Cuber has a larger percentage of type-6 sentences (generalizations illustrated with unfootnoted examples) than any other of the 23 texts. These two facts suggest that Cuber's high circulation may be due to outstanding readability.

Green's reported circulation is very largely in the Southern States, where some other of the leading texts have relatively little. A preliminary examination of Green's handling of the race issue suggests that his combination of tact and candor on this question may have given his book an advantage in the South.

Broom and Selznick, with a much larger circulation than the prediction formula calls for, and Gittler, with no reported classroom circulation in introductory courses, each earns its high factuality index by virtue largely of its use of extended case studies and survey reports. But Broom's text (and also Green's) are among the most effectively illustrated of the 23, while Gittler's has no illustrations whatever. Broom and his collaborators appear to have done an outstanding job of integrating their "adapted readings" with the theoretical sections of their text, while Gittler's book suffers by comparison in this respect.

A test of the above hypotheses is contemplated in future studies in this Project.

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HOW RELIABLE ARE THE FACTUALITY INDEXES?

A Preliminary Test. A pilot study was first carried out, in which two different samples of 20 sentences each were obtained from each text. A separate factuality index was derived from each of the two samples, and the Pearsonian correlation between these two separate indexes was found to be $\bar{r} = .695$. Such a correlation would occur by chance less than once in 3000 such investigations.

Estimating Ultimate Reliability. In order to increase further the reliability of the factuality indexes, an additional systematically random sample of 60 sentences was taken from each text, and indexes were calculated independently from these new samples. The correlation between the 40-sentence and the 60-sentence indexes was found to be $\bar{r} = .911$. Student's t for this coefficient is 9.8. Then, on the basis of standard statistical procedures, the correlation of the combined (100-sentence) indexes with the indexes which would presumably be obtained if all the sentences in each text were rated, was calculated. This coefficient of reliability was found to be $\bar{r} = .951$.

The Probable Error of Estimate. In spite of the high reliability indicated above, the standard error of estimate, in predicting ultimate scores from the 100-sentence indexes is 13.3 points, making the probable error of estimate approximately 9 points. To illustrate, the fact that the Ogburn text received a factuality index of 42 on its 100 sample sentences indicates merely that the chances are 50-50 that the index, if the entire book were similarly rated, would lie between 51 and 33.

How Trustworthy Are Ratings by One Judge? That even students (if they are highly intelligent) can produce factuality ratings having high reliabilities has been shown by previous studies.* It would be desirable to have similar confirmations here. But still more desirable would be independent replication of the present study by other sociologists, and the comparative analysis of the results.

HOW SERIOUS IS THE TEXTBOOK DEFICIENCY IN FACTUALITY?

The table on page 1 shows that only seven of the 23 textbooks have positive factuality scores, while the indexes of the other 16 range from -2 down to -100. The average score is -31.

The Universal Claim Is that Sociology IS a Science. Each one of the 23 textbooks asserts, in one way or another, that sociology is (or at least aspires to be) a science. For example, Green (whose preliminary factuality score is -43) offers this definition: "Sociology is the synthesizing and analyzing science of man in all his social relations" (10:11). Lundberg says: "Sociology may be defined as a body of related generalizations about human social behavior arrived at by scientific methods" (15:7). Cuber says: "Sociology may be defined as a body of scientific knowledge about human relationships" (6:5). Fichter says: "Sociology is the scientific study of patterned, shared human behavior" (7:1).

It Is Universally Asserted (or Taken for Granted) that Science Relates Hypotheses to Data. One of the most obvious principles of the scientific method is that mere loose generalizations, based upon casual and fragmentary observations or upon mere abstract reasoning, must be superseded by systematic observations of facts, and the building up of generalizations which are founded on and are verified

*See Hornell Hart and Associates, "Verifiability Ratings of Articles in Social Science," American Journal of Sociology, 53 (1947) 119-124.

by factual data. For example, Bogardus (2:543) says: "Something more [than common-sense observations are] needed, namely, data that are scientifically derived, classified, analyzed, and interpreted."

Somewhat similarly, Lundberg (15:5) says:

> "Collectively, then, the work of scientists in any field has the following phases:...
>
> "3. They gather and record data....
> "4. They analyze and organize the gathered data."

It seems safe to say, then, that no competent sociologist would deny the indispensable importance of factuality in sociology if it is to achieve genuine scientific status.

Three Reasons for Being Factual. Why should sociological authors attempt to make clear in their introductory textbooks the extent to which their generalizations are based on specific facts? At least three reasons suggest themselves:

1. To reduce the present near-chaos in the totality of what is presented to beginners in various colleges and universities as constituting "sociology." As was pointed out in Report 1, the 23 textbooks define their most basic term--social group--in 23 different, usually inconsistent, and frequently contradictory ways. Introductory sociologies at present display extreme divergencies in such matters as the content which they cover and the conclusions which they present on basic questions of social theory. In view of such facts, sociology cannot move far toward its avowed objective of becoming a science unless clear distinctions are made between offhand generalizations and prejudiced opinions on the one hand, and actual scientific findings on the other.

2. To train students in the scientific approach to social realities. This objective is generally accepted. As Ogburn (18:5) puts it: "There is little, we think, a student can learn in college that is more worthwhile than what part science should play in his life."

But if the author himself depends upon mere common sense, personal opinions, and warmed-over conclusions of other loose thinkers, his students are not likely to acquire either respect for or skill in genuine social science. Students will not be learning sociology as a science unless textbooks make clear the basic indispensability of deriving generalizations from facts, and verifying them by reference to facts.

3. To guide those who adopt textbooks. The conscientious teacher who is choosing a textbook needs to have some indication as to the extent to which a given author has built his text on verifiable facts rather than on mere casual observation, common-sense generalizations, and personal prejudices.

SOME OUTSTANDING ISSUES

The chief service which it may be hoped that the present report will render is to stimulate thought, discussion and research. Certain major issues have been raised which may well be stated here:

1. What Is the Optimum Factuality Index? The "unfactual" category includes a number of different kinds of sentences, among which are the following:

(a) Statements which may be pertinent in an introductory text, but which are so generally known that to footnote them would be pedantic or even ridiculous.

(b) Illustrative materials derived from common sense or even from imagination, which are important for teaching purposes, but which cannot be annotated.

(c) Statements quoted, with annotations, from the writings of other persons, some of whom, quite often, are or have been famous sociologists, but which clearly lack any specific verifiable factual basis.

(d) Generalizations which doubtless seem to the writer to be self-evident, but which are not factually verifiable, and on which other sociologists frequently disagree.

(e) Statements more or less strongly tinged with the personal value preferences of the writer, or purporting to state the value preferences of others, without verifiable supporting evidence.

Statements of the (a) and (b) types tend to lower the factuality index, and yet they may actually enhance the value of the textbook. Statements of the (d) and (e) types seem to me to be clear departures from the avowed scientific ideals of sociologists. Statements of the (c) type can often be used legitimately as data, but when used as "authoritative," they are unscientific.

Now a basic difficulty is that it is often hard--or even impossible--to discriminate verifiably between some of the above types. A factuality index lower than 100 is to be expected for even the best books, because of legitimate uses of statements of the (a), (b) and (c) types. But how much lower than 100 is the ideal level?

2. How Can Factuality Be Reconciled with Readability? Paul H. Landis commented as follows on the preliminary draft of this report: "Overstress on objectivity ... does much to discourage students of sociology to take a second course. Many young instructors seem to think they fail unless the introductory course equals the Chemistry course in reputation for being difficult and uninteresting...."

But factuality can be demonstrated without destroying or even seriously reducing readability--at least as reflected in adoptions. The figures already given as to the positive correlation between factuality indexes and classroom circulations prove that. The two top texts in reported circulations--Broom and Selznick, and Ogburn and Nimkoff--have two of the three highest factuality indexes. A later report is planned, to take up readability in considerable detail.

3. How Can Factuality Be Demonstrated Without Prohibitive Costs for Footnotes? Publishers and editors are understandably sensitive about the high costs of elaborate footnoting. Various devices are used in the 23 textbooks in order to meet this problem. In some cases footnotes are assembled by serial numbers at the ends of chapters, with the result that finding the reference which supports a given statement becomes an annoying--and sometimes a really difficult--chore.

But the problem is far from insoluble. A worthwhile topic of discussion among prospective textbook authors might be: "What are the most effective methods of demonstrating factuality, with minimum costs in textbook composition and make-up, and with maximum value to college students and to scholarly readers?"

CONCLUSIONS

Comments Are Invited. Criticisms and suggestions on this second report are invited--from authors, from editors, and also from teachers of Introductory Sociology.

Plans for Report No. 3. A comparative study of the topics covered by the 23 textbooks, and of the relative emphases given to each broad area, has been drafted, and will probably be mailed out early in May. Its tentative title is: "Comparative Coverage of Agreed-On Sociological Topics."

TWENTY-THREE INTRODUCTORY SOCIOLOGIES, 1952-1958

1. Bierstedt, Robert, The Social Order: An Introduction to Sociology, McGraw-Hill, New York, 1957.
2. Bogardus, Emory C., Sociology, Fourth Edition, Macmillan, New York, 1954.
3. Bossard, James H.S.; Walter A. Lunden, Lloyd V. Ballard, and Laurence Foster (eds.), Introduction to Sociology, The Stackpole Co., Harrisburg, Pa., 1952.
4. Broom, Leonard, and Philip Selznick, Sociology: A Text with Adapted Readings, Row, Peterson & Co., Evanston, Ill., 1955.
5. Carr, Lowell Juilliard, Analytical Sociology: Social Situations and Social Problems, Harper & Bros., New York, 1955.
6. Cuber, John F., Sociology: A Synopsis of Principles, Fourth Edition, Appleton-Century-Crofts, New York, 1959.
7. Fichter, Joseph H., Sociology, University of Chicago Press, 1957.
8. Freedman, Ronald (and associates), Principles of Sociology: A Text with Readings, Revised Edition, Henry Holt & Co., New York, 1956.
9. Gittler, Joseph B., Social Dynamics: Principles and Cases in Introductory Sociology, McGraw-Hill, New York, 1952.
10. Green, Arnold W., Sociology--An Analysis of Life in Modern Society, Second Edition, McGraw-Hill, New York, 1956.
11. Hertzler, Joyce O., Society in Action: A Study of Basic Social Processes, The Dryden Press, New York, 1954.
12. Koenig, Samuel, Man and Society: The Basic Teachings of Sociology, Barnes & Noble, Inc., New York, 1957 (An Everyday Handbook).
13. Landis, Paul H., Introductory Sociology, The Ronald Press Co., New York, 1958.
14. Lee, Alfred McClung (ed.), Principles of Sociology, Second Edition, Barnes & Noble, Inc., New York, 1957 (College Outline Series).
15. Lundberg, George A.; Clarence C. Schrag, and Otto N. Larsen, Sociology, Revised Edition, Harper & Bros., New York, 1958.
16. Mercer, Blaine E., An Introduction to the Study of Society, Harcourt, Brace & Co. New York, 1958.
17. Merrill, Francis E., with the assistance of H. Wentworth Eldredge, Society and Culture: An Introduction to Sociology, Prentice-Hall, Englewood Cliffs, N.J., 1957.
18. Ogburn, William F., and Meyer P. Nimkoff, Sociology, Third Edition, Houghton Mifflin, Chicago, 1958.
19. Rose, Arnold M., Sociology: The Study of Human Relations, Alfred A. Knopf, New York, 1956.
20. Roucek, Joseph S., and Roland L. Warren, Sociology--An Introduction, Littlefield Adams & Co., Ames, Iowa, 1957 (College Outlines).
21. Rumney, Jay, and Joseph Maier, Sociology--The Science of Society, Henry Schuman, New York, 1953.
22. Sellew, Gladys; Paul Hanley Furfey, and William T. Gaughan, An Introduction to Sociology, Harper & Bros., New York, 1958.
23. Sutherland, Robert L.; Julian L. Woodward, and Milton A. Maxwell, Introductory Sociology, Fifth Edition, J. B. Lippincott, Chicago, 1956.